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UCF-237DIVIN THE UNITED STATES PATENT
AND TRADEMARK OFFICE

Applicant: CHAI ET AL
 Serial No.: 09/506,160
 Filed: 02/17/00
 For: LUTETIUM YTRIUM ORTHOSILICATE SINGLE CRYSTAL
 SCINTILLATOR DETECTOR
 Examiner: Hannaher Group: 2878 Paper No.:
RESPONSE UNDER '116

Commissioner of Patents
 and Trademarks
 Washington, D.C. 20231

Sir:

In response to the Final Office Action mailed March 8, 2002, and the telephone interview with the examiner on March 28, 2002, and April 22, 2002, please amend the above identified application as follows:

IN THE CLAIMS

Claim 1(Second Time Amended). A scintillator detector for high energy radiation comprising : a monocrystalline structure of cerium doped lutetium yttrium orthosilicate $\text{Ce}_{2x}(\text{Lu}_{1-y}\text{Y}_y)_{2(1-x)}\text{SiO}_5$ where $x = \text{approximately } 0.00001 \text{ to approximately } 0.05$ and $y = \text{approximately } 0.0001 \text{ to approximately } 0.9999$.

CANCEL CLAIM 2.

Claim 4(First Time Amended). The crystal of Claim 1 [2] wherein x ranges from approximately 0.0001 to approximately 0.001 and y ranges from approximately 0.3 to approximately 0.8.

Claim 5(Second Time Amended). A scintillation detector assembly comprising:
 a cerium doped lutetium yttrium orthosilicate mono crystal; and,
 a photon detector coupled to said crystal, wherein an electrical signal is generated from the photon detector in response to said crystal being [when] exposed to a high energy gamma ray.

Claim 10(First Time Amended). A method of detecting energy with a scintillation detector, comprising the steps of:

receiving radiation by a crystal comprising cerium doped lutetium yttrium orthosilicate;

and

#8/Amend B
 4/25/02
 C. P. Davis

OK
 to
 enter
 w/
 replacement
 for p. 3
 submitted
 4-29-2002
 C/D
 5-2-2002

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